



TECHNICAL DATA SHEET

MAG - FLUX SE MODBUS PROTOCOL / CURRENT OUTPUT

COMPACT WITHOUT OPTICAL DISPLAY

Magnetic-inductive flow meter optimized for the implementation in automation systems



 made
in
Germany

- » Nominal diameters
 - Flange connection DN 15 (½") ... DN 800 (32")
 - Threaded connection G½ ... G2
 - Coupling connection DN 50 (2") ... DN 300 (12")
- » Measuring ranges from 0 ... 18095 m³/h
- » Measuring accuracy ±0,5 % from the reading
- » Without pressure loss
- » Simple commissioning
- » Compact design
- » Minimum maintenance needs
- » Long lifetime
- » Output optionally with analogue output (4 ... 20 mA) active or digital output (MODBUS RTU)

TECHNICAL DATA

Flow Sensor / Transducer

| | |
|---|---|
| Measuring principle | » Pulsed constant field (DC) |
| Input » Process Connection/Nominal Size | <ul style="list-style-type: none"> » Flange connection DN 15 (½") ... DN 800 (32") » Threaded connection G ½ ... G 2 » Coupling connection DN 50 (2") ... DN 300 (12") » Other connections (JIS, table) |
| Measuring Accuracy (Under reference conditions) » Error of measurement » Repeat accuracy | <ul style="list-style-type: none"> » ±0,5 % of the reading from 1 ... 10 m/s » ±0,4 % of the reading from ±1 ... < 1 m/s » ±0,15 % of the reading from 0,5 ... 10 m/s |
| Installation position » Inlet » Outlet | <ul style="list-style-type: none"> » 5 x DN » 2 x DN |
| Media temperature | » -20 °C ... 80 °C |
| Ambient temperature | » -20 °C ... 60 °C |
| Pressure limits | <ul style="list-style-type: none"> » Flange connection rubber lining: max. 250 bar » Flange connection PTFE lining: max. 40 bar » Threaded connection PTFE lining: max. 40 bar » Coupling connection rubber lining: max. 16 bar |
| Degree of protection | » IP 67 |

Medium conditions

| | |
|-----------------------------|-----------------|
| Medium | » Liquid |
| Minimum conductivity | » > 20µS/cm |
| Flow speed limits | » 0 ... 10 m/s |

Specifications

| | |
|---|---|
| Design | » Fully welded steel fitting |
| Material (Sensor) » Measuring tube » Solenoid chamber » Lining of measuring pipe » Electrode material » Flange material | <ul style="list-style-type: none"> » Stainless Steel » Steel » Hard Rubber, PTFE » Stainless Steel, Hastelloy, Titanium, Tantalum, Platinum » Steel, Stainless Steel |
| Material (Transmitter) | <ul style="list-style-type: none"> » Stainless Steel » Steel |
| Cable gland | » M12 x 1 |
| Corrosion protection class | » C2 (slightly polluted atmosphere, dry climate) |

Electrical data

| | |
|---------------------|--|
| Power supply | » 18 ... 36 V DC |
| Input | » 4 W |
| Output | <ul style="list-style-type: none"> » Analog 4 ... 20 mA » Digital MODBUS RTU (RS485) |
| Load | » Standard: ≤500 Ohm |

Dimensions Coupling Connection

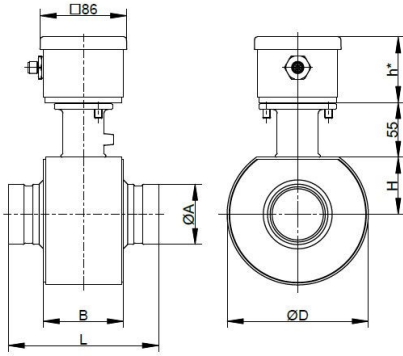


Fig. 1 Coupling connection dimensions

Tab. 1 Coupling connection dimensions

| Nominal size | | ØA (mm) | Installation length L (mm) | Dimensions of the sensor housing | | |
|--------------|-----|---------|-------------------------------|----------------------------------|--------|--------|
| DN | | | | B (mm) | D (mm) | H (mm) |
| 50 | 2" | 60,3 | 150 (0/-2,0) | 80 | 140 | 57 |
| 65 | 2½" | 76,1 | 150 (0/-2,0) | 80 | 155 | 63 |
| 80 | 3" | 88,9 | 150 (0/-2,0) | 80 | 170 | 70 |
| 100 | 4" | 114,3 | 200 (0/-2,0) | 120 | 210 | 86 |
| 125 | 5" | 139,7 | 200 (0/-2,0) | 120 | 240 | 98 |
| 150 | 6" | 168,3 | 200 (0/-2,0) | 120 | 285 | 117 |
| 200 | 8" | 219,1 | 300 (0/-2,0) | 200 | 350 | 143 |
| 250 | 10" | 273,0 | 300 (0/-2,0) | 200 | 440 | 180 |
| 300 | 12" | 323,9 | 300 (0/-2,0) | 200 | 520 | 213 |

Dimensions Threaded Connection

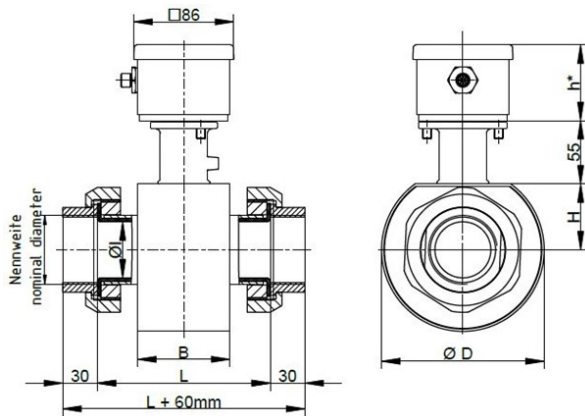


Fig. 2 Thread connection dimensions

Tab. 2 Dimensions of threaded connection

| Nominal Size | | Ø I * (mm) | Installation length L (mm) | Dimensions of the sensor housing | | |
|--------------|--|------------|-------------------------------|----------------------------------|--------|--------|
| | | | | B (mm) | D (mm) | H (mm) |
| G ½" | | 14,0 | 150 (0/-2,0) | 80 | 130 | 53 |
| G ¾" | | 19,0 | 150 (0/-2,0) | 80 | 130 | 53 |
| G 1" | | 27,0 | 150 (0/-2,0) | 80 | 130 | 53 |
| G 1¼" | | 33,0 | 150 (0/-2,0) | 80 | 130 | 53 |
| G 1½" | | 38,0 | 150 (0/-2,0) | 80 | 130 | 53 |
| G 2" | | 48,5 | 150 (0/-2,0) | 80 | 140 | 57 |

Dimensions Flange Connection

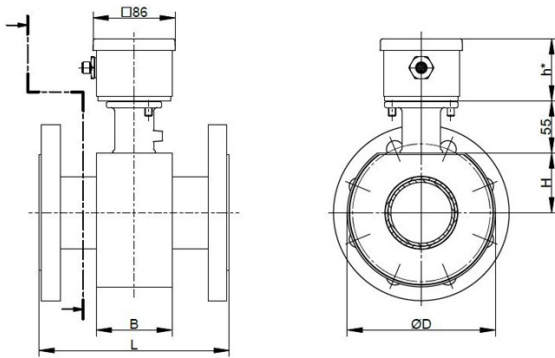


Fig. 3 Flange connection dimensions

Tab. 3 Flange connection dimensions

| Nominal size | | Installation Length | | Dimensions of the Sensor Housing | |
|--------------|-----|---------------------|--------|----------------------------------|--------|
| DN | | L (mm) | B (mm) | D (mm) | H (mm) |
| 15 | ½" | 200 (0/-3,0) | 80 | 130 | 53 |
| 20 | ¾" | 200 (0/-3,0) | 80 | 130 | 53 |
| 25 | 1" | 200 (0/-3,0) | 80 | 130 | 53 |
| 32 | 1¼" | 200 (0/-3,0) | 80 | 130 | 53 |
| 40 | 1½" | 200 (0/-3,0) | 80 | 130 | 53 |
| 50 | 2" | 200 (0/-3,0) | 80 | 140 | 57 |
| 65 | 2½" | 200 (0/-3,0) | 80 | 155 | 63 |
| 80 | 3" | 200 (0/-3,0) | 80 | 170 | 70 |
| 100 | 4" | 250 (0/-3,0) | 120 | 210 | 86 |
| 125 | 5" | 250 (0/-3,0) | 120 | 240 | 98 |
| 150 | 6" | 300 (0/-3,0) | 120 | 285 | 117 |
| 200 | 8" | 350 (0/-3,0) | 200 | 350 | 143 |
| 250 | 10" | 450 (0/-4,0) | 200 | 440 | 180 |
| 300 | 12" | 500 (0/-4,0) | 200 | 520 | 213 |
| 350 | 14" | 550 (0/-5,0) | 225 | 474 | 237 |
| 400 | 16" | 600 (0/-5,0) | 250 | 524 | 262 |
| 450 | 18" | 600 (0/-5,0) | 270 | 584 | 292 |
| 500 | 20" | 600 (0/-5,0) | 300 | 629 | 315 |
| 600 | 24" | 600 (0/-5,0) | 360 | 734 | 367 |
| 700 | 28" | 700 (0/-5,0) | 420 | 839 | 420 |
| 800 | 32" | 800 (0/-5,0) | 500 | 939 | 470 |

Ordering:

The designation code is made up as follows:

MAG57 _ _ - S _ _ _ 0 - 3_ AR / _

① ② ③ ④ ⑤ ⑥ ⑦

① Lining

| | |
|----------|--|
| 0 | » PTFE (Not available with coupling connection) |
| 1 | » Hard Rubber (Not available with threaded connection) |

② Nominal Pressure

| | |
|----------|----------------------------|
| 1 | » PN 10 / JIS 10 K |
| 2 | » PN 16/ 150 class |
| 3 | » PN 25/ 300 class |
| 4 | » PN 40 |
| 5 | » N 63 |
| 6 | » PN 100 |
| 7 | » PN 160 |
| 8 | » PN 250 |
| 9 | » Special Nominal Pressure |

③ Nominal Diameter

| | | max. Flow Rate (m ³ /h) | (l/min.) |
|----------|----------------|------------------------------------|-----------|
| A | » DN 15 (½") | » 6,36 | » 106,0 |
| C | » DN 25 (1") | » 17,67 | » 294,5 |
| D | » DN 32 (1¼") | » 28,695 | » 482,5 |
| E | » DN 40 (1½") | » 45,24 | » 754,0 |
| F | » DN 50 (2") | » 70,69 | » 1 178 |
| G | » DN 65 (2½") | » 119,4 | » 1 991 |
| H | » DN 80 (3") | » 180,9 | » 3 016 |
| J | » DN 100 (4") | » 282,7 | » 4 712 |
| K | » DN 125 (5") | » 441,7 | » 7 363 |
| L | » DN 150 (6") | » 636,1 | » 10 602 |
| M | » DN 200 (8") | » 1130 | » 18 849 |
| N | » DN 250 (10") | » 1 767 | » 29 452 |
| P | » DN 300 (12") | » 2 544 | » 42 411 |
| Q | » DN 350 (14") | » 3 463 | » 57 726 |
| R | » DN 400 (16") | » 4 523 | » 75 398 |
| Y | » DN 450 (18") | » 5 725 | » 95 425 |
| S | » DN 500 (20") | » 7 068 | » 117 809 |
| T | » DN 600 (24") | » 10 178 | » 169 646 |
| U | » DN 700 | » 13 854 | » 230 907 |
| V | » DN 800 | » 18 095 | » 301 592 |

④ Connection standard and connection material

| | |
|----------|--|
| | |
| A | » EN 1092-1, W.Nr. 1.0460/1.0570 |
| B | » EN 1092-1, W.Nr. 1.4404 |
| C | » ANSI B16.5 150 RF, W.Nr. 1.0432/1.0570 |
| D | » ANSI B16.5 300 RF, W.Nr. 1.0432/1.0570 |
| F | » ANSI B16.5 150 RF, W.Nr. 1.4404/1.4571 |
| G | » ANSI B16.5 300 RF, W.Nr. 1.4404/1.4571 |
| K | » Coupling Connection |
| N | » Threaded Connection G |

⑤ Electrode Material

| | |
|----------|-------------------|
| | |
| 1 | » Stainless Steel |
| 2 | » Hastelloy |
| 6 | » Platinum |
| 4 | » Tantalum |
| 3 | » Titanium |

⑥ Output / Communication

| | |
|----------|------------------------|
| | |
| B | » 4 ... 20 mA (active) |
| M | » Modbus RTU |
| | |

⑦ Option

| | |
|-------------|---|
| | |
| A 01 | One grounding electrode made of stainless steel |
| A 02 | Two grounding electrodes made of stainless steel |
| A 03 | One grounding electrode made of Hastelloy |
| A 04 | Two grounding electrodes made of Hastelloy |
| A 05 | One grounding electrode made of Titanium |
| A 06 | Two grounding electrodes made of Titanium |
| A 07 | One grounding electrode made of Tantalum |
| A 08 | Two grounding electrodes made of Tantalum |
| A 09 | One grounding electrode made of Monel |
| A 10 | Two grounding electrodes made of Monel |
| A 11 | One grounding electrode made of Platinum |
| A 12 | Two grounding electrodes made of Platinum |
| B 06 | With 3-point calibration certificate |
| B 07 | With 6-point calibration certificate |
| B 08 | With 5-point calibration certificate |
| B 11 | TAG plate inscription in english |
| C 12 | Acceptance test EN 10204:2004 3.1 |
| FTH | Factory acceptance test to H protocol Material & Welding quality Welding check, Calibration Check |
| L 06 | Lining Linatex - natural soft rubber |
| S 99 | Sensor suitable for alternating field transmitter Transmag 2 |
| Y 70 | Painting C5M ISO 12944 |
| Y 98 | With Smart plug to connect InterMag 2 and Transmag 2 |
| Y 01 | Measuring range: 0 to ... m ³ /h add in clear text |
| Y 04 | Silicone-free materials |
| Y 15 | Measuring-point number (max. 16 char.) specify in plain text |
| Y 16 | Measuring-point number (max. 27 char.) specify in plain text |
| Y 17 | TAG plate stainless steel |